

IN THE CLAIMS:

Please amend Claims so as to read as follows:

1. (Four Times Amended) A liquid crystal display device, comprising:

a liquid crystal display element including:

a pair of substrates; γ and

a liquid crystal layer sandwiched by ~~the~~ said substrates;

a pair of polarizers disposed so as to sandwich ~~the~~ said liquid crystal display element; and

at least one phase difference plate, each of said at least one phase difference plate defining a surface and being disposed between ~~the~~ said liquid crystal display element and ~~the~~ said pair of polarizers γ ;

wherein ~~the~~ (i) each of said at least one phase difference plate has three principal refractive indices n_a , n_b , and n_c , (ii) said refractive indices are [being] mutually related by the inequality $n_a < n_b < n_c$, wherein the (iii) the direction of said principal refractive index n_a coincides with the direction of a y - coordinate axis among x and y - coordinate axes on said surface, said y - coordinate axis being orthogonal to said normal, and (iv) the direction of said principal refractive index n_b inclines relative to the normal to a said surface and to the direction of said x-coordinate axis of the phase difference plate, and

wherein the refractive index anisotropy Δn (550) of ~~the~~ said liquid crystal material for rays of light having the wavelength of 550 nm is specified to be more than 0.060 and less than 0.120 , and

wherein the refractive index anisotropy of said liquid crystal material varies with other wavelengths of rays of light within a range that allows substantially no viewing angle dependent coloration to occur in an image displayed by said device.

2. (Cancelled)

3. (Amended) The liquid crystal display device as defined in claim 1,
wherein the refractive index anisotropy Δn (550) is specified to be not less than 0.065 and not more than 0.115.

4. (As originally filed) The liquid crystal display device as defined in claim 3,
wherein the refractive index anisotropy Δn (550) is specified to be not less than 0.070 and not more than 0.095.

5. (As originally filed) The liquid crystal display device as defined in claim 1,
wherein the inclination angle of the principal refractive index n_b of the phase difference plate is specified to be in the range from 15° to 75°.

6. (Twice Amended) A liquid crystal display device, comprising:

a liquid crystal display element including :

a pair of substrates τ_1 and

a liquid crystal layer sandwiched by ~~the~~ said substrates;

a pair of polarizers disposed so as to sandwich ~~the~~ said liquid crystal display element; and

at least one phase difference plate, each of said at least one phase difference plate defining a surface and being disposed between ~~the~~ said liquid crystal display element and [the] said pair of polarizers τ_1

wherein ~~the~~ each of said at least one phase difference plate (i) has three principal refractive indices n_a , n_b , and n_c being, (ii) said refractive indices are mutually related by the inequality $n_a < n_b < n_c$, wherein (iii) the direction of said principal refractive index n_a coincides with the direction of a y - coordinate axis among x and y - coordinate axes on said surface, said y - coordinate axis being orthogonal to said normal, and (iv) the direction of the principal refractive index n_b inclines relative to the normal to a said surface and to the direction of said x-coordinate axis of the phase difference plate, and

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wherein (i) the refractive index anisotropy Δn (550) of the liquid crystal material for rays of light having the wavelength of 550 nm is specified to be more than 0.060 and less than 0.120, ~~and~~ ~~wherein~~ (ii) Δn (450) - Δn (650), i.e., the difference between the refractive index anisotropy Δn (450) of the liquid crystal material for rays of light having a wavelength of 450 nm and the refractive index anisotropy Δn (650) thereof for rays of light having the wavelength of 650 nm, is specified to be not less than 0.0070 and not more than 0.0250, and (iii) the refractive index anisotropy of said liquid crystal material varies with other wavelengths of rays of light within a range that allows substantially no viewing angle dependent coloration to occur in an image displayed by said device.

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7. (As originally filed) The liquid crystal display device defined in claim 6, wherein $\Delta n(450) - \Delta n(650)$ is specified to be not less than 0.0200 and not more than 0.0250.
8. (As originally filed) The liquid crystal display device as defined in claim 6, wherein the inclination angle of the principal refractive index n_b of the phase difference plate is specified to be in the range from 15° to 75°.
9. (Cancelled)

10. (Amended) The liquid crystal display device as defined in claim 6,
wherein the refractive index anisotropy Δn (550) is specified to be
not less than 0.065 and not more than 0.115.
11. (As originally filed) The liquid crystal display device as defined in claim 10,
wherein the refractive index anisotropy Δn (550) is specified to be not less
than 0.070 and not more than 0.095.
12. (Cancelled)
13. (Amended) The liquid crystal display device as defined in claim 6,
wherein the optical phase difference plate includes:
a support base composed of a transparent organic high polymer;
and
a liquid crystal polymer layer formed on the support base to be
aligned to possess oblique orientation and crosslinked.
14. (Twice Amended) the liquid crystal display device as defined in claim 6 8,
wherein the optical phase difference plate includes:
a support base composed of a transparent organic high polymer;
and
a liquid crystal polymer layer formed on the support base to be
aligned to posses hybrid orientation and crosslinked.

15. (Cancelled)

16. (Cancelled)

17. (Cancelled)

18. (Cancelled)

19. (Cancelled)

20. (Cancelled)

21. (Cancelled)

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22. (Cancelled)

23. (Cancelled)

24. (Cancelled)

25. (Cancelled)

26. (Cancelled)

27. (Cancelled)

28. (Cancelled)

29. (Twice Amended) A liquid crystal display device, comprising:

a liquid crystal display element including a liquid crystal layer
sandwiched by a pair of light-transmitting substrates each
having an electrode layer provided thereon;

a pair of polarizers disposed so as to sandwich ~~the~~ said liquid
crystal display element; and

at least one phase difference plate each said phase difference
plate defining a surface and being disposed between ~~the~~
said liquid crystal display element and ~~the~~ said pair of
polarizers,

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wherein the improvement comprises that (i) each of said the at
least one phase difference plate has having three principal
refractive indices n_a , n_b , and n_c being mutually related by
the inequality $n_a < n_b < n_c$, and the direction of the principal
refractive index n_a coinciding with the direction of a y-
coordinate axis among x and y-coordinate axes on each
said surface of said at least one phase difference plate, the
y-coordinate axis being orthogonal to said normal, and the
direction of the principal refractive index n_b inclines
inclining relative to the normal of a to said surface of said
at least one phase difference plate and to the direction of
said x-coordinate axis, and that, (ii) the liquid crystal layer
is constituted by a liquid crystal material wherein the
refractive index anisotropy Δn (550) of the liquid crystal
material for rays of light having the wavelength of 550 nm
is being specified to be more than 0.060 and less than
0.120, and wherein (iii) Δn (450) - Δn (650), i.e., the
difference between the refractive index anisotropy Δn (450)
of the liquid crystal material for rays of light having a
wavelength of 450 nm and the refractive index anisotropy
 Δn (650) thereof for rays of light having the wavelength of
650 nm, is being specified to be not less than 0.0070 and
not more than 0.0250, such that and (iv) the refractive
index anisotropy thereof of said liquid crystal material being
is specified to vary with other wavelengths of rays of light
within a range that allows substantially no viewing-angle
dependent coloration to occur on a displayed image.

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30. (Cancelled)

31. (Twice Amended) A liquid crystal display device, comprising:

a liquid crystal display element including:

a pair of substrates $\bar{\bar{z}}$, and

a liquid crystal layer sandwiched between ~~the~~ said substrates;

a pair of polarizers disposed so as to sandwich ~~the~~ said liquid crystal display element; and

at least one phase difference plate, each said at least one phase

difference plate defining a surface and being disposed between ~~the~~

said liquid crystal display element and the said pair of polarizers,

wherein (i) the each of said at least one phase difference plate has three

principal refractive indices n_a , n_b , and n_c being mutually related by

the inequality $n_a < n_b < n_c$, ~~and~~ (ii) the direction of the principal

refractive index n_a coincides with the direction of a

y-coordinate axis among x and y-coordinate axes on each said

surface of said at least one phase difference plate, the y-coordinate

axis being orthogonal to said normal, and (iv) the direction of the

principal refractive index n_b inclines relative to the normal of a to

said surface and to the direction of said x-coordinate axis of said

at least one phase difference plate;

wherein $\Delta n(450) - \Delta n(650)$, i.e., the difference between the refractive

index anisotropy $\Delta n(450)$ of the liquid crystal material for rays of

light having a wavelength of 450 nm and the refractive index

anisotropy $\Delta n(650)$ thereof for rays of light having the wavelength

of 650 nm, is specified to be not less than 0.0070 and not more

than 0.0250, and

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wherein the refractive index anisotropy of said liquid crystal material varies with other wavelengths of rays of light within a range that allows substantially no viewing angle dependent coloration to occur in an image displayed by said device.

32. (New Claim, 1/26/01) The liquid crystal display device as defined in claim 31, wherein the refractive index anisotropy Δn (550) of the liquid crystal material for rays of light having the wavelength of 550 nm is specified to be more than 0.060 and less than 0.120.
33. (New Claim, 1/26/01) The liquid crystal display device as defined in claim 31, wherein the refractive index anisotropy Δn (550) is specified to be not less than 0.065 and not more than 0.115.
34. (New Claim, 1/26/01) The liquid crystal display device as defined in claim 31, wherein the refractive index anisotropy Δn (550) is specified to be not less than 0.070 and not more than 0.095.
35. (New Claim, 1/26/01) The liquid crystal display device as defined in claim 31, wherein Δn (450) - Δn (650) is specified to be not less than 0.0200 and not more than 0.0250.

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36. (New Claim, 1/26/01) The liquid crystal display device as defined in claim 32, wherein the refractive index anisotropy Δn (550) of the liquid crystal material for rays of light having the wavelength of 550 nm is specified to be not less than 0.065 and smaller than 0.115.

37. (New Claim, 1/26/01) The liquid crystal display device as defined in claim 36, wherein the refractive index anisotropy Δn (550) is specified to be not less than 0.070 and not more than 0.095.

38. (Cancelled)

39. (Cancelled)

40. (Cancelled)

41. (Cancelled)

42. (Cancelled)

43. Cancelled)

44. (Cancelled)

45. (Cancelled)

46. (Cancelled)

47. (Cancelled)

48. (New Claim on 8/16/02) The liquid crystal display as defined in claim 31,
wherein the inclination angle of the principal refractive index n_b of
the phase difference plate is specified to be in the range from 15°
to 75°.
